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(4) There must be means to allow the crew to check, in flight, the function of each fire detector electric circuit.

(5) Wiring and other components of each fire detector system in an engine compartment must be at least fire resistant.

(b) *Fire extinguishing systems.* (1) Except for combustor, turbine, and tail pipe sections of turbine engine installations that contain lines or components carrying flammable fluids or gases for which it is shown that a fire originating in these sections can be controlled, there must be a fire extinguisher system serving each engine compartment.

(2) The fire extinguishing system, the quantity of the extinguishing agent, the rate of discharge, and the discharge distribution must be adequate to extinguish fires. An individual “one shot” system may be used.

(3) The fire-extinguishing system for a nacelle must be able to simultaneously protect each compartment of the nacelle for which protection is provided.

12. *Fire extinguishing agents.* Comply with § 25.1197 of this chapter in effect on September 26, 1978.

13. *Extinguishing agent containers.* Comply with § 25.1199 of this chapter in effect on September 26, 1978.

14. *Fire extinguishing system materials.* Comply with § 25.1201 of this chapter in effect on September 26, 1978.

15. *Expiration.* This Special Federal Aviation Regulation terminates on September 13, 1983, unless sooner rescinded or superseded.

[Doc. No. 18315, 44 FR 53729, Sept. 17, 1979; 45 FR 25047, Apr. 14, 1980; 45 FR 80973, Dec. 8, 1980, as amended by Doc. No. 21716, 47 FR 35153, Aug. 12, 1982]

Subpart A—General

§ 21.1 Applicability.

(a) This part prescribes—

(1) Procedural requirements for the issue of type certificates and changes to those certificates; the issue of production certificates; the issue of airworthiness certificates; and the issue of export airworthiness approvals.

(2) Rules governing the holders of any certificate specified in paragraph (a)(1) of this section; and

(3) Procedural requirements for the approval of certain materials, parts, processes, and appliances.

(b) For the purposes of this part, the word “product” means an aircraft, aircraft engine, or propeller. In addition, for the purposes of Subpart L only, it includes components and parts of aircraft, of aircraft engines, and of propellers; also parts, materials, and appli-

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ances, approved under the Technical Standard Order system.

[Doc. No. 5085, 29 FR 14563, Oct. 24, 1964, as amended by Amdt. 21–2, 30 FR 8465, July 2, 1965; Amdt. 21–6, 30 FR 11379, Sept. 8, 1965]

§ 21.2 Falsification of applications, reports, or records.

(a) No person shall make or cause to be made—

(1) Any fraudulent or intentionally false statement on any application for a certificate or approval under this part;

(2) Any fraudulent or intentionally false entry in any record or report that is required to be kept, made, or used to show compliance with any requirement for the issuance or the exercise of the privileges of any certificate or approval issued under this part;

(3) Any reproduction for a fraudulent purpose of any certificate or approval issued under this part.

(4) Any alteration of any certificate or approval issued under this part.

(b) The commission by any person of an act prohibited under paragraph (a) of this section is a basis for suspending or revoking any certificate or approval issued under this part and held by that person.

[Doc. No. 23345, 57 FR 41367, Sept. 9, 1992]

§ 21.3 Reporting of failures, malfunctions, and defects.

(a) Except as provided in paragraph (d) of this section, the holder of a Type Certificate (including a Supplemental Type Certificate), a Parts Manufacturer Approval (PMA), or a TSO authorization, or the licensee of a Type Certificate shall report any failure, malfunction, or defect in any product, part, process, or article manufactured by it that it determines has resulted in any of the occurrences listed in paragraph (c) of this section.

(b) The holder of a Type Certificate (including a Supplemental Type Certificate), a Parts Manufacturer Approval (PMA), or a TSO authorization, or the licensee of a Type of Certificate shall report any defect in any product, part, or article manufactured by it that has left its quality control system and that it determines could result in any of the occurrences listed in paragraph (c) of this section.

(c) The following occurrences must be reported as provided in paragraphs (a) and (b) of this section:

(1) Fires caused by a system or equipment failure, malfunction, or defect.

(2) An engine exhaust system failure, malfunction, or defect which causes damage to the engine, adjacent aircraft structure, equipment, or components.

(3) The accumulation or circulation of toxic or noxious gases in the crew compartment or passenger cabin.

(4) A malfunction, failure, or defect of a propeller control system.

(5) A propeller or rotorcraft hub or blade structural failure.

(6) Flammable fluid leakage in areas where an ignition source normally exists.

(7) A brake system failure caused by structural or material failure during operation.

(8) A significant aircraft primary structural defect or failure caused by any autogenous condition (fatigue, understrength, corrosion, etc.).

(9) Any abnormal vibration or buffeting caused by a structural or system malfunction, defect, or failure.

(10) An engine failure.

(11) Any structural or flight control system malfunction, defect, or failure which causes an interference with normal control of the aircraft for which derogates the flying qualities.

(12) A complete loss of more than one electrical power generating system or hydraulic power system during a given operation of the aircraft.

(13) A failure or malfunction of more than one attitude, airspeed, or altitude instrument during a given operation of the aircraft.

(d) The requirements of paragraph (a) of this section do not apply to—

(1) Failures, malfunctions, or defects that the holder of a Type Certificate (including a Supplemental Type Certificate), Parts Manufacturer Approval (PMA), or TSO authorization, or the licensee of a Type Certificate—

(i) Determines were caused by improper maintenance, or improper usage;

(ii) Knows were reported to the FAA by another person under the Federal Aviation Regulations; or

(iii) Has already reported under the accident reporting provisions of Part

430 of the regulations of the National Transportation Safety Board.

(2) Failures, malfunctions, or defects in products, parts, or articles manufactured by a foreign manufacturer under a U.S. Type Certificate issued under § 21.29 or § 21.617, or exported to the United States under § 21.502.

(e) Each report required by this section—

(1) Shall be made to the Aircraft Certification Office in the region in which the person required to make the report is located within 24 hours after it has determined that the failure, malfunction, or defect required to be reported has occurred. However, a report that is due on a Saturday or a Sunday may be delivered on the following Monday and one that is due on a holiday may be delivered on the next workday;

(2) Shall be transmitted in a manner and form acceptable to the Administrator and by the most expeditious method available; and

(3) Shall include as much of the following information as is available and applicable:

(i) Aircraft serial number.

(ii) When the failure, malfunction, or defect is associated with an article approved under a TSO authorization, the article serial number and model designation, as appropriate.

(iii) When the failure, malfunction, or defect is associated with an engine or propeller, the engine or propeller serial number, as appropriate.

(iv) Product model.

(v) Identification of the part, component, or system involved. The identification must include the part number.

(vi) Nature of the failure, malfunction, or defect.

(f) Whenever the investigation of an accident or service difficulty report shows that an article manufactured under a TSO authorization is unsafe because of a manufacturing or design defect, the manufacturer shall, upon request of the Administrator, report to the Administrator the results of its investigation and any action taken or proposed by the manufacturer to correct that defect. If action is required to correct the defect in existing articles, the manufacturer shall submit the data necessary for the issuance of an appropriate airworthiness directive to the

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Manager of the Aircraft Certification Office for the geographic area of the FAA regional office in the region in which it is located.

[Amdt. 21-36, 35 FR 18187, Nov. 28, 1970, as amended by Amdt. 21-37, 35 FR 18450, Dec. 4, 1970; Amdt. 21-50, 45 FR 38346, June 9, 1980; Amdt. 21-67, 54 FR 39291, Sept. 25, 1989]

§ 21.5 Airplane or Rotorcraft Flight Manual.

(a) With each airplane or rotorcraft that was not type certificated with an Airplane or Rotorcraft Flight Manual and that has had no flight time prior to March 1, 1979, the holder of a Type Certificate (including a Supplemental Type Certificate) or the licensee of a Type Certificate shall make available to the owner at the time of delivery of the aircraft a current approved Airplane or Rotorcraft Flight Manual.

(b) The Airplane or Rotorcraft Flight Manual required by paragraph (a) of this section must contain the following information:

(1) The operating limitations and information required to be furnished in an Airplane or Rotorcraft Flight Manual or in manual material, markings, and placards, by the applicable regulations under which the airplane or rotorcraft was type certificated.

(2) The maximum ambient atmospheric temperature for which engine cooling was demonstrated must be stated in the performance information section of the Flight Manual, if the applicable regulations under which the aircraft was type certificated do not require ambient temperature on engine cooling operating limitations in the Flight Manual.

[Amdt. 21-46, 43 FR 2316, Jan. 16, 1978]

Subpart B—Type Certificates

SOURCE: Docket No. 5085, 29 FR 14564, Oct. 24, 1964, unless otherwise noted.

§ 21.11 Applicability.

This subpart prescribes—

(a) Procedural requirements for the issue of type certificates for aircraft, aircraft engines, and propellers; and

(b) Rules governing the holders of those certificates.

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§ 21.13 Eligibility.

Any interested person may apply for a type certificate.

[Amdt. 21-25, 34 FR 14068, Sept. 5, 1969]

§ 21.15 Application for type certificate.

(a) An application for a type certificate is made on a form and in a manner prescribed by the Administrator and is submitted to the appropriate Aircraft Certification Office.

(b) An application for an aircraft type certificate must be accompanied by a three-view drawing of that aircraft and available preliminary basic data.

(c) An application for an aircraft engine type certificate must be accompanied by a description of the engine design features, the engine operating characteristics, and the proposed engine operating limitations.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-40, 39 FR 35459, Oct. 1, 1974; Amdt. 21-67, 54 FR 39291, Sept. 25, 1989]

§ 21.16 Special conditions.

If the Administrator finds that the airworthiness regulations of this subchapter do not contain adequate or appropriate safety standards for an aircraft, aircraft engine, or propeller because of a novel or unusual design feature of the aircraft, aircraft engine or propeller, he prescribes special conditions and amendments thereto for the product. The special conditions are issued in accordance with Part 11 of this chapter and contain such safety standards for the aircraft, aircraft engine or propeller as the Administrator finds necessary to establish a level of safety equivalent to that established in the regulations.

[Amdt. 21-19, 32 FR 17851, Dec. 13, 1967; as amended by Amdt. 21-51, 45 FR 60170, Sept. 11, 1980]

§ 21.17 Designation of applicable regulations.

(a) Except as provided in § 23.2, § 25.2, § 27.2, § 29.2 and in parts 34 and 36 of this chapter, an applicant for a type certificate must show that the aircraft, aircraft engine, or propeller concerned meets—

(1) The applicable requirements of this subchapter that are effective on